

Invasive-pest specialist enlightens NIEHS in Earth Week lecture

By Kelly Lenox

As part of Earth Week at NIEHS, the Environmental Awareness Advisory Committee (EAAC) sponsored an enlightening discussion April 24 by entomologist Alonzo Suazo, Ph.D., on invasive species threatening North Carolina's varied ecosystems.

Suazo, (<http://www.ncagr.gov/plantindustry/plant/entomology/GM.htm>) with the North Carolina Department of Agriculture and Consumer Services (NCDACS), educated the audience on measures to halt the spread of several species. NIEHS hazardous waste manager and co-chair of EAAC Paul Johnson hosted Suazo's presentation.

Suazo was careful to distinguish between non-indigenous species, which include everything from corn and wheat to dogs and cats, and invasive species, which can damage ecosystems or agricultural crops. "The cost of damage was recently estimated at nearly \$200 billion per year, nationally," Suazo said.

Start with prevention

Scientists and government agencies have a variety of tools at their disposal to combat invasive pests, but the most effective action is prevention, Suazo emphasized. To that end, he shared a surprising vector by which invasive pests spread across the land - firewood.

According to Suazo, the natural spread of the highly destructive emerald ash borer (EAB), whose metallic green image graced the fliers for Suazo's talk, is about 5 miles per year. However, in little over a decade it spread from Michigan to 20 states and two provinces of Canada. Scientists believe the EAB spread so rapidly via firewood transport - whether commercial or informal, among family and friends. Firewood is such an important means of travel that the NCDACS prepared a series of [fact sheets](http://ncforestservice.gov/forest_health/fh_firewood.htm) (http://ncforestservice.gov/forest_health/fh_firewood.htm) on pests of current concern and telltale signs of firewood infestation.

Available tools to combat invasive insects

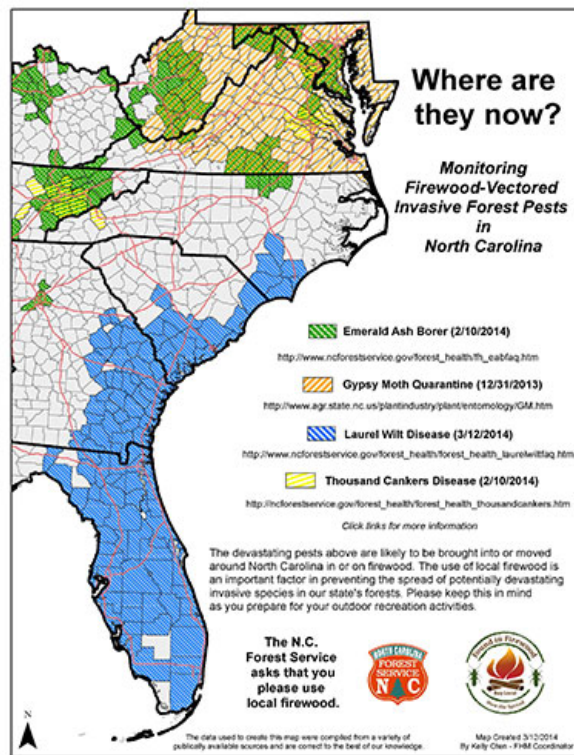
Once an invasive species is detected, the race is on to survey the extent, limit the spread, and work to eradicate the pest. Surveys may include traps - for example, some insects can be lured to traps baited with pheromones. Visual inspection is useful for weeds and insects on which pheromones have no effect. It's also the tool of choice for detecting the giant East African snail - "giant" is part of the official name, as it can grow up to 8 inches in length. According to Suazo, the species, imported illegally as a pet, currently devours plants in the Wilmington, N.C., area.

Another tool researchers use is biosurveillance - for example, the non-stinging *Cerceris fumipennis* wasp preys on the EAB. Researchers can determine whether the EAB has spread to a particular area by monitoring nests of this wasp for EAB remains.

Another effective approach is education and outreach, which was precisely Suazo's mission with the alert and engaged audience at NIEHS. Suazo provided detailed, helpful answers to questions throughout his talk, and those who attended will likely be more careful where they buy their next load of firewood.



Suazo explained that the gypsy moth travels by laying egg masses on cars, boats, and tents. The high numbers trapped around a particular rest stop in New Hanover County, N.C., are probably due to the boat repair facility across the street, he said. (Photo courtesy of Steve McCaw)



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